

Lung biopsy

Information for patients



Your doctor has advised that you need a test called a lung biopsy. This leaflet will help to explain what a lung biopsy is, how it will be performed and hopefully answer any other questions you may have.

What is a lung biopsy?

A lung biopsy is a way of getting a piece of tissue or a sample from the lung by passing a small needle into the chest through a tiny cut in the skin. This is done by a radiologist who is a doctor that specialises in these procedures. A pathologist then examines the sample in the laboratory under a microscope. This should help us to find out what is wrong with you.

Will I need a general anaesthetic?

No. The biopsy will be done under a local anaesthetic - which is a small injection to numb the skin. You will not be asleep for the procedure.

Can I eat and drink before the test?

Yes. You may have a light breakfast beforehand.

Should I take my tablets on the day of the test?

Yes, generally. Blood thinning medications including Warfarin will need to be stopped for the procedure. This should be discussed with your doctor in the clinic before having the lung biopsy. A plan will be in place for such medications and you will be provided with appropriate advice for managing this.

What will happen when I arrive at the hospital?

Most lung biopsies are performed within the Radiology department; on a CT scanner although occasionally Ultrasound is used. A CT (Computerised Tomography) scan uses X-Rays (radiation) and a computer to create detailed images of the inside of the body; within a single breath hold.

A CT scanner is a 'polo-mint' shaped machine containing a bank of X-Ray tubes/detectors which spin around an axis in order to create 3D images through the body. A patient lies on the scanner bed and moves in and out of the 'polo-mint'; the scans are very quick and take a matter of minutes and the machine sounds like a washing machine during a spin cycle.



You will be shown to a waiting area where a member of staff will take some basic observations such as blood pressure and a pulse. The radiologist who will perform the lung biopsy will come and explain the procedure, risks and benefits to you - and you will be asked to sign a consent form, if you haven't already done so.

You will then be asked to change into a hospital gown and taken to the CT scanner. Some further members of the team (Radiographers) will help the Radiologist with planning and performing of the procedure in the CT scan room. You will be asked to lie on the CT scan bed and a few pictures of

your chest will be taken to find exactly where it would be best to take the samples from. You will be asked to keep as still as possible for the duration of the procedure; this may include you lying flat for around 20-30 minutes. You may breathe normally during the procedure although at times the Radiologist may ask you to breath hold. If this is required, specific instructions will be given to you.

After an initial scan, the radiologist will clean the skin with antiseptic, and cover the area with a clean sheet. Local anaesthetic will be injected into the skin with a small needle. The anaesthetic stings as it goes in, but the area will soon go numb. Having checked that everything is lined up as planned, the doctor will make a small cut in the skin and then pass a needle between the ribs into the lung to take some samples.

Will it hurt me?

It shouldn't hurt, however around 1 in 3 patients may feel some pain which may also be sharp as the as the needle passes through the lining of the lung. You may be asked at points in the procedure to avoid talking, however if at any point you do feel any pain, let the doctor know we may be able to give some extra anaesthetic.

After the biopsy, a check scan is done before you go back to the recovery area. When you are in the recovery area, you will be prescribed painkillers to be taken If required.

Can I go home after the biopsy?

Once the biopsy is done, you will need to remain in hospital and lie flat in bed for an hour or two. Another CT Scan, or an

X-Ray will be performed to check your lung is healing before discharge. Occasionally, the doctor doing the biopsy may prefer a longer period of observation (about three hours).

If everything looks fine you will be able to go home, provided there is someone to stay with you overnight. If you do not have someone to stay with you overnight, an overnight stay in hospital will be required. This will have to be arranged in advance, so please discuss this with your doctor in the clinic beforehand. On rare occasions, despite making arrangements in advance, the procedure may have to be cancelled on the day due to lack of bed availability across the hospital. Some people get pain after the anaesthetic wears off when at home, for which you can take pain killers such as paracetamol.

What are the common risks of having a lung biopsy?

It is very common for a little air to leak into the space around the lung during a biopsy and this may cause the lung to partially collapse. This is called a pneumothorax. We know that this happens in about half the patients but mostly the pneumothorax is so small it doesn't cause a problem and resolves spontaneously.

Occasionally lots of air leaks out and causes a big pneumothorax causing a greater degree of lung collapse, which needs treating - this happens about five times in every 100 biopsies, but rarely the risk will be higher - this will be explained by the Radiologist. If that were to happen, we would treat it by putting in a small tube, called a chest drain, to let the air out.

If this happened to you, you would need to stay in the hospital overnight.

Another common complication is coughing up some blood. This usually happens in about 1 in 20 patients having the biopsy either during the biopsy or straight after the biopsy. Although it is quite frightening at the time, it usually settles down very quickly. Very rarely this may continue and may need admission to hospitals. It is quite normal to cough up some small streaks of blood for a day or two after the biopsy. If this continues for more than a couple of days or if you are concerned then please contact the Radiology department, local A&E or your GP as required.

What are the serious complications of a lung biopsy?

In general, lung biopsies are very safe but like all hospital procedures there can be serious complications that are very rare (somewhere between 1 in a few hundred to 1 in a couple of thousand). Strokes, heart attacks, ICU admission, need for dialysis and deaths have been reported but they are all extremely uncommon. This will all be explained to you on the day and any concerns can be discussed with your doctor. Will there be any side effects after the biopsy?

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Most people have no problems at all. Very rarely, an air leak (Pneumothorax) can develop a few hours after the biopsy or after you have gone home.

If you do become suddenly short of breath, or get severe chest pain, the person looking after you should contact ambulance services straight away.

Questions and answers

Can I drive after the biopsy?

We would recommend someone else drives you home after the test. You should be able to drive again the next day if you feel well.

Can I take public transport by myself including taxi?

We would strongly recommend that someone accompanies you back from the hospital on discharge.

What about flying in an aircraft after a biopsy?

You should not normally fly for six weeks after a lung biopsy.

If you do need to fly in less than six weeks, please discuss this with your hospital doctor.

When can I go back to work?

You should be able to go back to work the day after the biopsy, unless advised otherwise by your doctor.

Can I restart any medication that was stopped for the procedure?

You should normally be able to re-start the medication, but the Radiologist (or your doctor) will advise you on this.

When will I get the results?

It can take a week to 10 days for the results of the test to get back to your doctor. You should have been given an appointment to see the doctor again. If you have not heard from the hospital within two weeks of the biopsy, please ring the consultant's secretary to make another appointment.

Please remember, you are free to ask any questions that you may have at any time.

Contact us

Radiology Department

St James's University Hospital, Beckett Street,
Leeds, LS9 7TF

Telephone: **0113 733 4974**

This leaflet is also available in electronic form on the hospital website: www.leedsth.nhs.uk and search for patient information leaflets - Lung Biopsy.



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